

### REMARKS

In an Office Action mailed on April 13, 2004, claims 1, 7, 17, 22, 23, 25, 27, 28, 30, 33 and 35 were rejected under 35 U.S.C. § 102(e) as being anticipated by Renfro; claims 18 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Renfro in view of Markel; claims 3, 6 and 34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Renfro in view of German 1,234,584; claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Renfro in view of Chawla; claims 17 and 18 were rejected under 35 U.S.C. § 102(b) as being anticipated by Chawla; and claims 1, 3, 6, 22, 23, 25, 27, 28, 30, 33 and 34 were rejected under 35 U.S.C. § 102(b) as being anticipated by German. Although Applicant disagrees with the election by original presentation argument raised by the Examiner, for purposes of expediting prosecution, claims 36-41 have been cancelled. These rejections are addressed below.

#### Rejections of Claims 1, 3, 6, 7, 22, 23 and 25:

The Examiner maintains the § 102(e) rejection of independent claim 1 in view of Renfro. In particular, the Examiner refers to the language in columns 3 and 4 of Renfro to support the proposition that Renfro allegedly teaches a charge case that defines at least one slot about which the charge case is adapted to fracture. However, Applicant submits that the Examiner is selectively reading portions of Renfro to blend the depiction of the channels 16 (see, for example, Fig. 1 of Renfro) in Renfro's shaped charge housing 12 with Renfro's discussion of striations that are formed in the physical exterior of a skirt portion of a liner.

Contrary to the Examiner's position, Renfro neither teaches nor suggests slots that are formed in the housing 12 of Renfro's shaped charge 10 for purposes of causing the housing 12 to fracture about these slots. Instead, the liner of Renfro's shaped charge is depicted by the reference numeral 50, and as is clearly shown in the figures, the liner 50 is separated from the housing 12 by the explosive 28. Thus, the figures of Renfro do not depict or even suggest of slots that are formed in the housing 12 (the alleged charge case of independent claim 1), to cause the housing 12 to fracture about new slots. The Examiner even refers to the charge case of Renfro by reference numeral 14, the reference numeral that references the outer wall of the housing 12. *See, for example*, Renfro, 7:27-29.

Thus, in summary, the Examiner is selectively reading Renfro to link the channels 16 depicted in Fig. 1 to the striations in the liner 50, as described in columns 3 and 4. However,

when these different passages of Renfro are read in their proper contexts, it becomes clear that Renfro does not teach or even suggest slots that are formed in a charge case about which the charge case is adapted to fracture in response to the detonation of an explosive material. Thus, Renfro fails to anticipate claim 1.

Independent claim 1 is also rejected under 35 U.S.C. § 102(b) as being anticipated by German. In the rejection, the Examiner refers to either item 9 or 10 as allegedly disclosing a plurality of slots about which a charge case fractures. However, as depicted in Figure 1 of German, the charge case is denoted by reference numeral 1, as reference numeral 9, 10 points to some type of projectile inside a cap 3 to the case 1. There is no teaching or even a suggestion, however, that the element labeled by reference numeral 9 or 10 forms a charge case about which the case is adapted to fracture. Thus, for at least this reason, withdrawal of the § 102(b) rejection of independent claim 1 in view of German is requested.

Claims 2, 6, 7, 22, 23 and 25 are patentable for at least the reason that these claims depend from an allowable claim. Therefore, for at least the reasons that are set forth above, withdrawal of the §§ 102 and 103 rejections of claims 1, 3, 6, 7, 22, 23 and 25 is requested.

Rejections of Claims 17-19, 27, and 30:

The method of independent claim 17 stands rejected under 35 U.S.C § 102 in view of either Renfro or Chawla.

Claim 17 overcomes the § 102 rejection in view of Renfro for at least the reason that Renfro fails to teach or even suggest providing a perforating string that includes a charge case that defines at least one slot about which a charge case is adapted to fracture. See discussion of Renfro in view of claim 1 above. Thus, for at least this reason, Renfro fails to anticipate independent claim 17.

Regarding the § 102 rejection of claim 17 in view of Chawla, the Examiner contends that some sort of score marks would remain in the liner 36 after manufacturing, and thus, the final product would contain the score marks. However, even assuming, for purposes of argument, that the Examiner's assertion is correct, Chawla still fails to anticipate independent claim 17. For example, Chawla fails to teach or suggest forming a *charge case* that defines at least one slot about which the charge case is adapted to fracture. A liner does not constitute a charge case of a shaped charge.

Additionally, the Examiner fails to consider all of the limitations of independent claim 17 in their entirety. More specifically, claim 17 recites a perforating string that has shaped charges that include a charge case defining at least one slot about which the charge case is adapted to fracture. Thus, even assuming, *arguendo*, that such score marks remain in the liner (and assuming, for purposes of this argument, that the liner is a charge case), in the perforating gun itself, there is no teaching or suggestion in Chawla that the charge case would be adapted to fracture against the score mark remnants. Thus, for at least this additional, independent reason, Chawla fails to anticipate independent claim 17.

Claims 18, 19, 27 and 28 are patentable for at least the reason that these claims depend from an allowable, independent claim. Therefore, for at least the reasons that are set forth above, withdrawal of the §§ 102 and 103 rejections of claims 17-19, 27, 28 and 30 is requested.

Rejections of Claims 33-35:

Independent claim 33 stands rejected under 35 U.S.C. § 102 in view of either Renfro or German. However, neither Renfro nor German teaches or suggests providing a shaped charge that has a charge case that defines at least one groove about which the charge case is adapted to fracture in response to the detonation of an explosive. *See, for example*, the discussion of independent claim 1 above. More specifically, although Renfro generally forming striations in a liner, the reference 16 neither shows the striations in a charge case nor does Renfro contain any teaching or suggestion that the housing 12 is adapted to fracture about the grooves 16 in response to the detonation of an explosive. German also fails to teach a shaped charge that has a charge case that defines at least one groove about which the charge case is adapted to fracture in response to the detonation of an explosive. The member pointed to by reference numerals 9 and 10 is not a charge case; and the Examiner fails to provide any showing that the member 9, 10 fractures about the depicted score marks. Thus, neither reference anticipates independent claim 33.

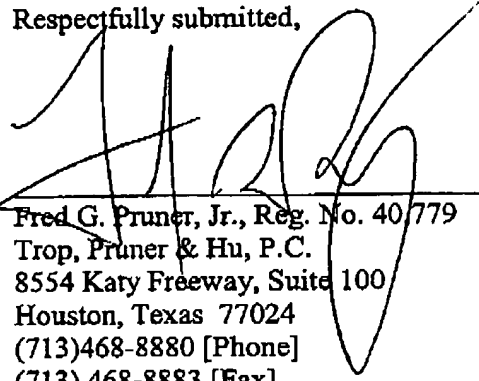
Claims 34 and 35 are patentable for at least the reason that these claims depend from an allowable claim. Thus, withdrawal of the § 102 rejections of claims 33-35 is requested.

CONCLUSION

In view of the foregoing, withdrawal of the §§ 102 and 103 rejections and a favorable action in the form of a Notice of Allowance are requested. The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 20-1504 (22.1450).

Respectfully submitted,

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